

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF RECEIPT OF
RECORD COPY

(PCT Rule 24.2(a))

From the INTERNATIONAL BUREAU

To:

SANTOS, Samia, Amin
Rua Paraiba, 1000/14 Andar
CEP-30130-141 Belo Horizonte, MG
BRÉSIL

Date of mailing (day/month/year) 07 March 2001 (07.03.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference	International application No. PCT/BR00/00159

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

PROVENZA, Thadeu, Rezende (all designated States)

International filing date : 15 December 2000 (15.12.00)
Priority date(s) claimed : 29 December 1999 (29.12.99)
Date of receipt of the record copy
by the International Bureau : 06 February 2001 (06.02.01)
List of designated Offices :

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW
EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
National : AU, CA, CN, CU, IL, IN, JP, KP, KR, MX, RU, US

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase
☒ confirmation of precautionary designations
☒ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer:

Eugénia Santos

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 July 2001 (12.07.2001)

PCT

(10) International Publication Number
WO 01/50442 A1

(51) International Patent Classification⁷: **G09B 23/28**,
23/30

Avenida do Contorno, 2646/404, Sta. Efigênia,
CEP-30110-080 Belo Horizonte- MG (BR).

(21) International Application Number: PCT/BR00/00159

(81) Designated States (*national*): AU, CA, CN, CU, IL, IN,
JP, KP, KR, MX, RU, US.

(22) International Filing Date:
15 December 2000 (15.12.2000)

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English

(26) Publication Language: English

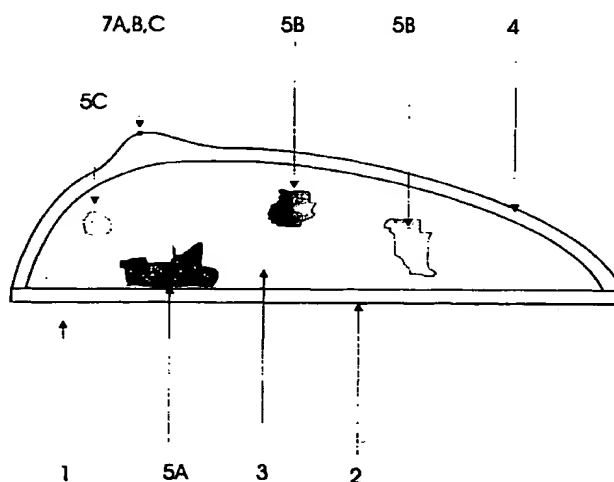
(30) Priority Data:
PI 9906054-0 29 December 1999 (29.12.1999) BR

Published:
— With international search report.

(71) Applicant and
(72) Inventor: PROVENZA, Thadeu, Rezende [BR/BR];

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND



(57) Abstract: The present patent describes a simulator device for human feminine mammary gland, that is destined to guide patient, nurses, doctors and the whole personnel of the medical, educational area and lay population in the detection of pathological occurrences, through touch. It is known the notorious difficulty of recognition of pathological occurrences of the human feminine mammary gland, so much for own woman that solemnity examines herself, as for the personnel of the medical area or the education area, with a body (1), put upon to a base (2) made by rigid material, as plastic, metal, wood, formic, leather, rubber, etc., serving as support to the stuffing material (3) that gives volume to the body (1); the stuffing material (3) is normally prepared with many different materials like small particles, as grains, flakes, seeds, sawdust, sands, flour, cotton, floss, plastic, scum, silicon, rubber, light metal, etc., or gelatinous, gaseous or liquid material, or still others that simulate the inside tissue of the mammary gland, having a texture that allows the observation, for the touch, of the elements (5.a) and (5.b) simulators of existent pathologies inside the body (1).

WO 01/50442 A1

"SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND".

The present patent describes a simulator device for human feminine mammary gland, that is destined to guide patient, nurses, doctors and the whole personnel of the medical, educational area and lay population in the detection of pathological occurrences, through touch. It is known the notorious difficulty of recognition of pathological occurrences of the human feminine mammary gland, so much for own woman that solemnity examines herself, as for the personnel of the medical area or the education area.

To solving such inconvenience, the present invention was developed, it is composed by a didactic model that reproduces the intrinsic and extrinsic characteristics of the feminine suckles, fixed on a frame or on a chart destined to the user's orientation.

The main characteristic of the this simulator device is the facilitation of the exam of the mammary gland, for specialized people or not, once it propitiates, by touch, the comparison, of inside and outside existent pathology simulators, with the possible occurrences of abnormal signs, indicators of pathologies, verified in the woman suckles.

To allow a visualization and a perfect understanding of the means of the present simulator device, illustrative drawings are enclosed, where:

The Figure 1 - represents a frontal view of the simulator device for human feminine mammary gland put upon to the instructions chart.

The Figure 2 - represents a frontal view of the simulator device for human feminine mammary gland.

The Figure 3 - represents a section " A - A " of the simulator device for human feminine mammary gland.

The Figure 4 - represents a section " A - A " of the simulator device for human feminine mammary gland put upon to the instructions chart.

5 The Figure 5 - represents a view of the simulator device for human feminine mammary gland being put upon to the instructions chart.

As it is shown in the above related figures, the simulator device for human feminine mammary gland has a body (1), put upon to a base (2) made by rigid material, as plastic, metal, 10 wood, formic, leather, rubber, etc., serving as support to the stuffing material (3) that gives volume to the body (1); the stuffing material is normally prepared with many different material like small particles, as grains, flakes, seeds, sawdust, sands, flour, cotton, floss, plastic, scum, silicon, rubber, light 15 metal, etc., or gelatinous, gaseous or liquid material, or still others that simulate the inside tissue of the mammary gland, having a texture that allows the observation, for the touch, of the elements (5.a) and (5.b) simulators of existent pathologies inside the body (1).

20 These elements (5a), for its time, should come fixed in the base (2) or in the own stuffing material (3), simulating rigid pathologies, in an irregular and angular way, they must be made by wood, mineral, metal, plastic, or other rigid material, as well as to present the elements (5.b) loosened of the base, floating in 25 the stuffing material (3), simulating non rigid pathologies, with the internal material having spherical or round form, of flatter aspect, made in soft and malleable material, as cotton, rubber, plastic, vinyl, scum, etc., or using gases, liquids, gelatinous materials, flakes, etc., preferably inside an elastic or similar 30 spherical film.

The base (2) is preferably to fasten the simulator for the external borders to a flexible and elastic cover (4) that can be a

response of human suckles and should be made in rubber, fabric, skin of animals, plastic, metallic screen, silicon, polyurethane, etc., forming the group that makes the contention of the stuffing material (3) and of the elements (5.a) and (5.b) simulators of pathologies.

The cover (4) of the body (1) has five defined areas (A, B, C, D, D, E), representing the pigmented areola (6), the nipple (7) and the remaining of the gland area represented in another four quadrants (B, C, D and E).

The nipple (7) may also shows elements (5c, 5d and 5e) pathology simulators, in the figure 2 represented by three aleatoric points, with easy visual identification, corresponding to the emersion of three secretion types after being the nipple pressed or not with the fingers, as it: hemorrhage with dark coffee color (A1); blood hemorrhage color (A2); crystalline hemorrhage like water (A3).

To each element (5a, 5b, 5c, 5d and 5f) simulator corresponds a specific possible pathology occurrence.

The body (1) can be fastened in a frame (8) and be made by rigid material, as cardboard, plastic, metal, wood, formic, leather, acrylic, etc., endowed with a lowering (9) in its central part for the fitting the body (1), that should contain spaces (10) for orientations about providences that should be taken in case of detection of some of the simulate pathological occurrences, as well as spaces (11) for any information of public interest and publicity.

As constructive variants, suggested for cases in that the user has restrictions for the touch in a simulation of part of the human body, the form of the device simulator of the feminine mammary gland can be represented in a stylized way, like a half of a pear or of a drop, or still to a solid whose base is a triangle,

a circle, etc., or any solid that can represent, although symbolically, the feminine mammary gland.

The external coating of the flexible cover (4) it can be colored in any shade and tonality, from the several tones of human skin or any other color, its variations and combinations.

In one of the quadrants to be chosen, preferably that one that doesn't show any pathology simulator element, a costal arch can be inserted, in rigid material, hiding a rib.

It will be understood that several modifications can be introduced without leaving the patent field of protection, being able to substitute some elements by others that would have the same technical characteristics.

CLAIMS

1. "SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND", to guide patient, nurses, doctors and the whole personnel of the medical, educational area and lay population in the detection of pathological occurrences, by touch, **characterized by** a body (1), put upon to a base (2) made by rigid material, as plastic, metal, wood, formic, leather, rubber, etc., serving as support to the stuffing material (3) that gives volume to the body (1); the stuffing material is normally prepared with many different material like small particles, as grains, flakes, seeds, sawdust, sands, flour, cotton, floss, plastic, scum, silicon, rubber, light metal, etc., or gelatinous, gaseous or liquid material, or still others that simulate the inside tissue of the mammary gland, having a texture that allows the observation, for the touch, of the elements (5.a) and (5.b) simulators of existent pathologies inside the body (1).
2. "SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND", according with claim 1, **characterized by** the simulators elements of existent pathologies inside the body (1), are fixed (5a) in the base (2) or in the stuffing material (3), simulating rigid pathologies, in an irregular and angular way, made with rigid material, and untiled (5b) from the base (2), floating in the stuffing material (3), simulating non fasten pathologies, in spherical or round ways, of smooth aspect, made in malleable material, inside an elastic spherical film.
3. "SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND", according with claim 1, **characterized by** the cover (4) of the body (1) be divided in five defined areas (A, B, C, D, E), representing the pigmented areola (6), whose area is represented in four quadrants (A1, A2, A3

and A4), the nipple (7) and the remaining area of the gland represented in another four quadrants (B, C, D and it is).

4. "SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND", according with claim 1, **characterized by** the nipple (7) having elements (5c, 5d and 5e) pathology simulators, corresponding to the emersion of three secretion types after being the nipple pressed or not with the fingers.
5. "SIMULATOR DEVICE FOR HUMAN FEMININE MAMMARY GLAND", according with claim 1, **characterized by** characterized for the body (1) can be fastened in a rigid frame (8), endowed with lowering (9) in its central part for the fitting of the body (1), that should contain spaces (10) for orientations, as well as spaces (11) for any information of public interest and publicity.

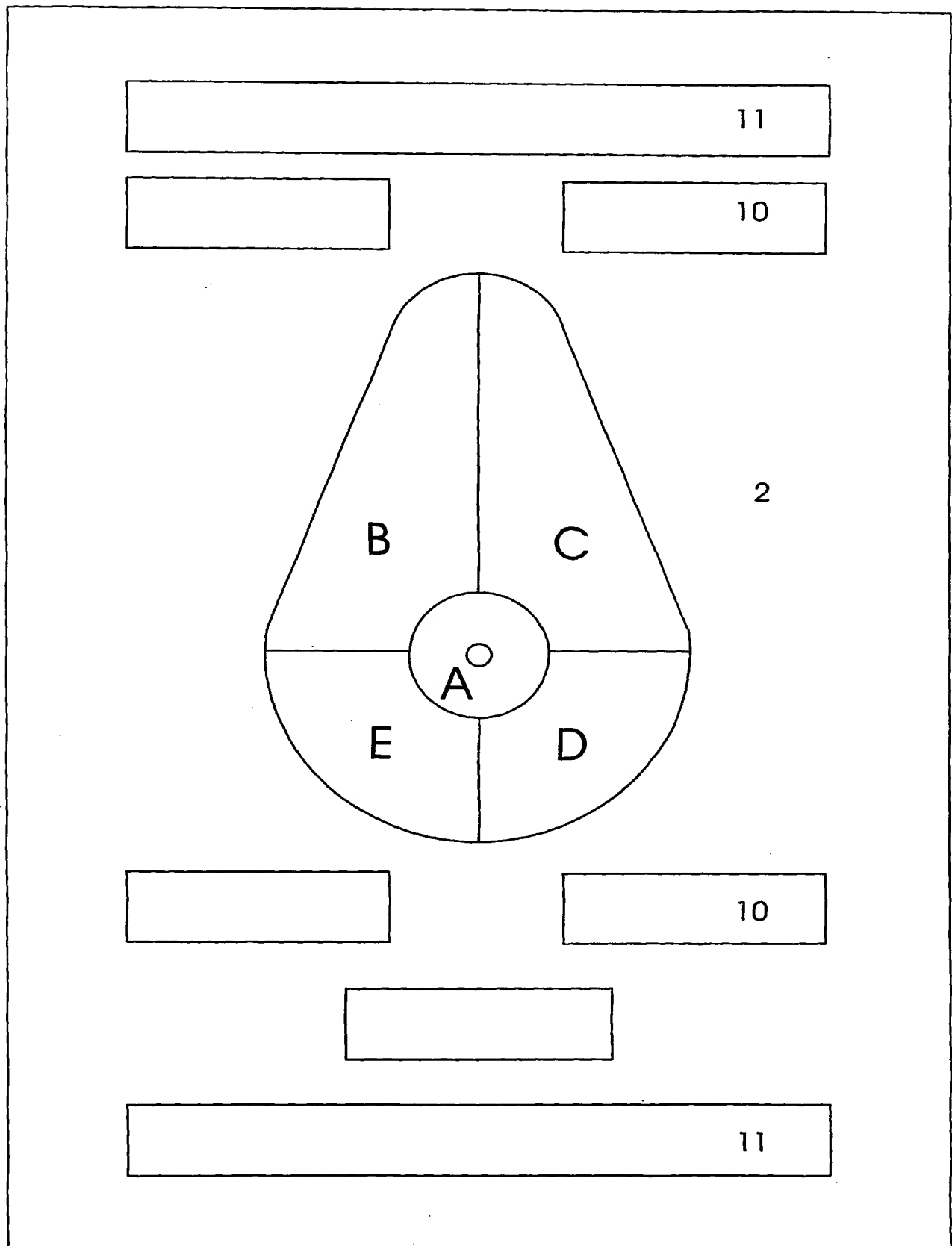


FIG. 1

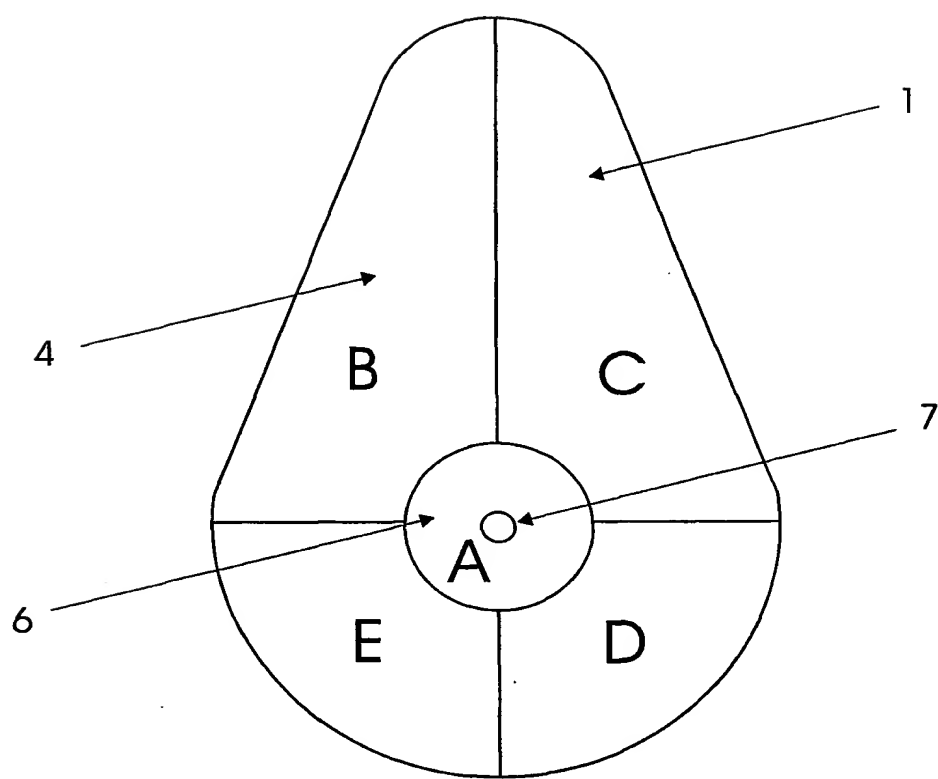
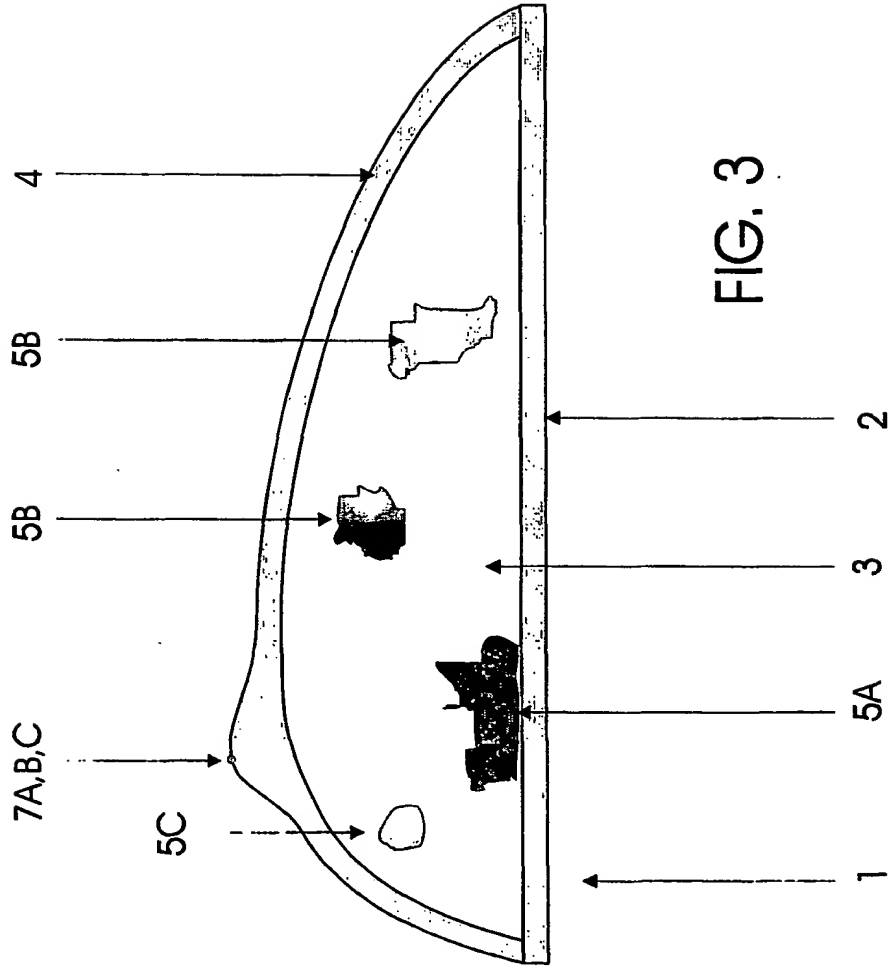
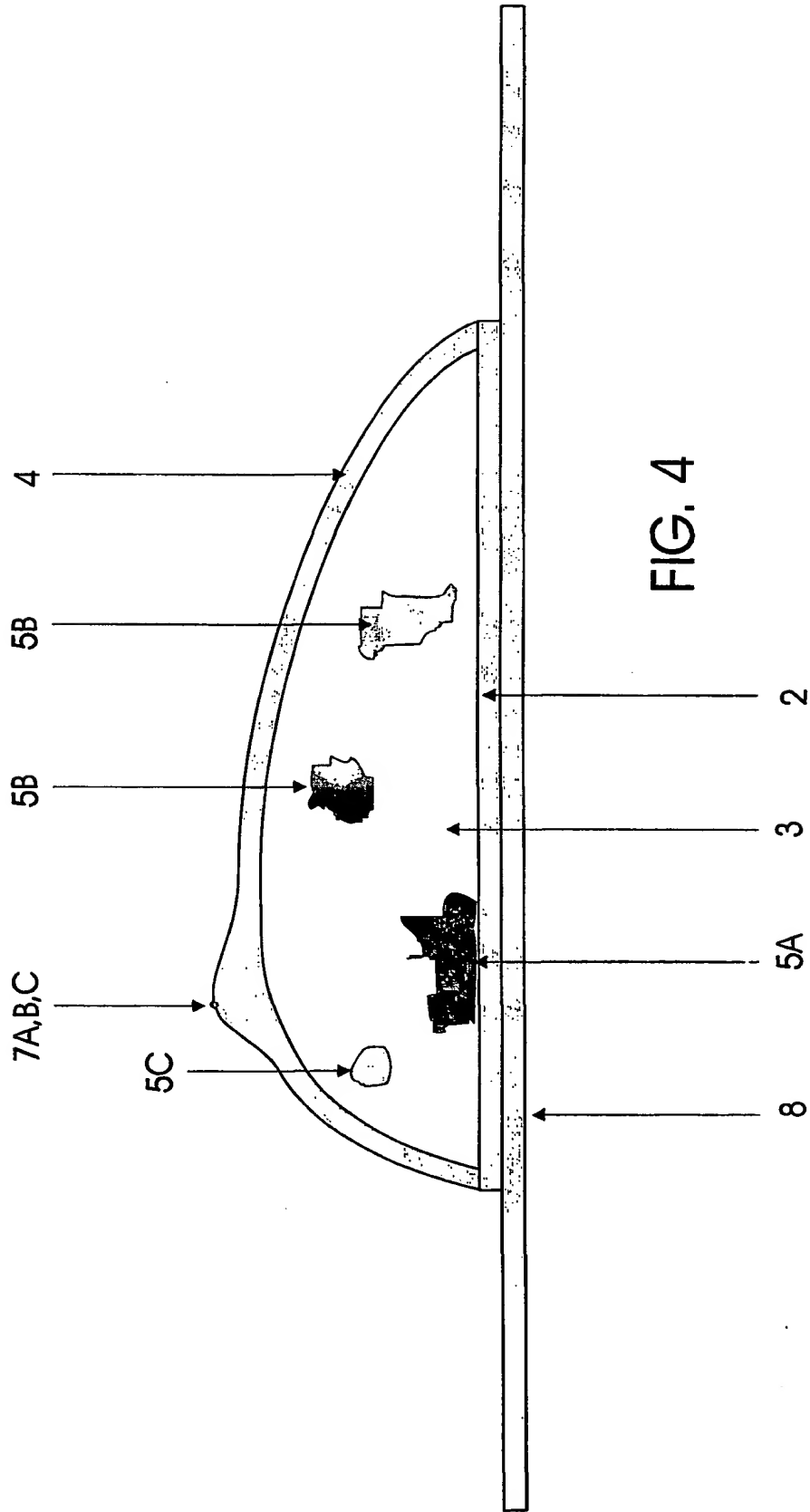


FIG. 2





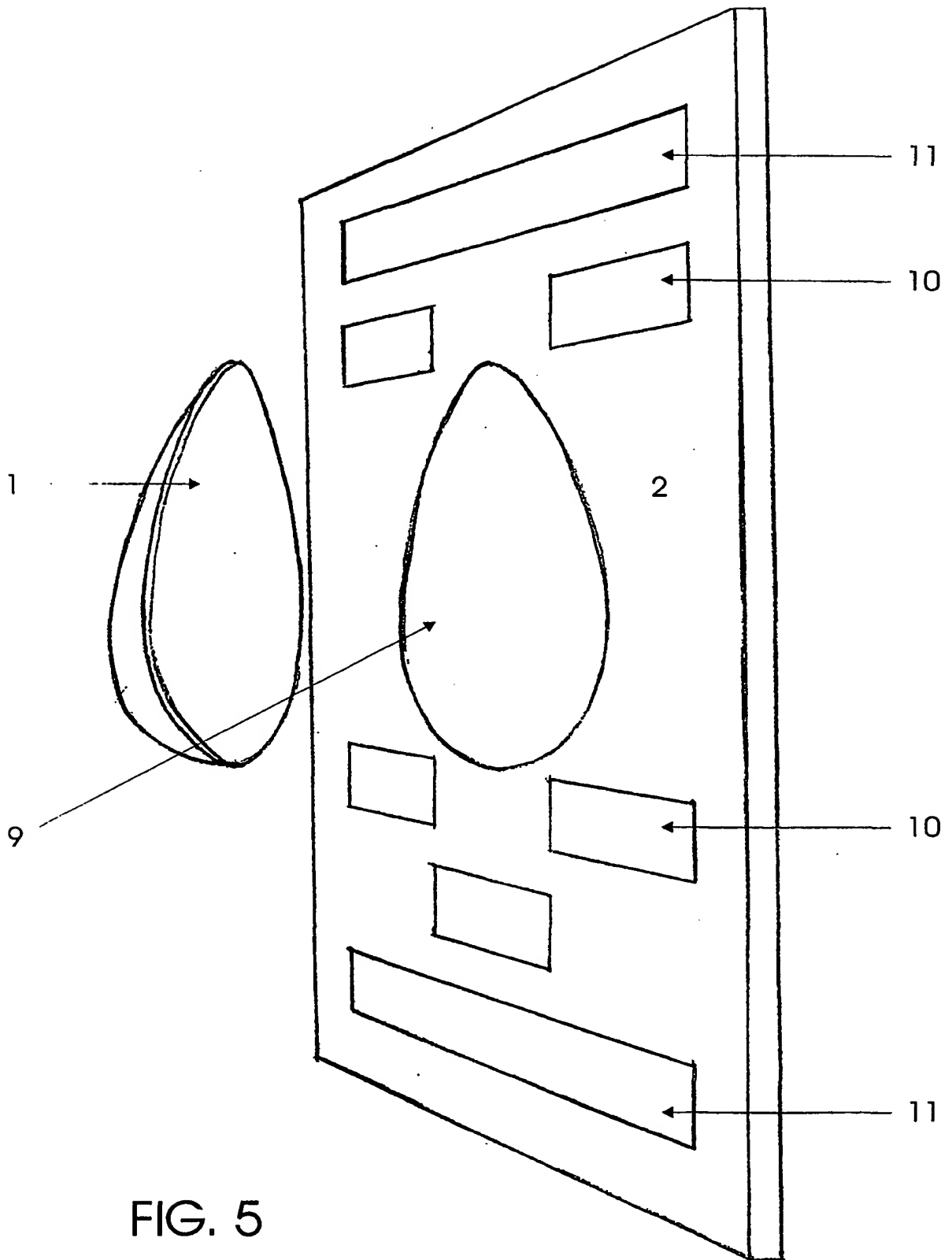


FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 00/00159

CLASSIFICATION OF SUBJECT MATTER

IPC⁷: G09B 23/28, 23/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: G09B 23/28, 23/30, 23/32, 23/34

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4001951 A (FASSE W. G.), 11 January 1977 (11.01.77)	1,2,3
A	the whole document.	4,5
X	GB 2241815 A (CANCER RES INST.) 11 September 1991 (11.09.91)	1,2,3
A	figure 1 and 2 and description of figures.	4,5

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

27 March 2001 (27.03.2001)

Date of mailing of the international search report

12 April 2001 (12.04.2001)

Name and mailing address of the ISA/AT

Austrian Patent Office

Kohlmarkt 8-10; A-1014 Vienna

Facsimile No. 1/53424/535

Authorized officer

KOSKARTI

Telephone No. 1/53424/326

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/BR 00/00159

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
GB	A1	2241815	11-09-1991	GB	A0 9005124	02-05-1990
US	A	4001951	11-01-1977	none		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 00/00159

CLASSIFICATION OF SUBJECT MATTER

IPC⁷: G09B 23/28, 23/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: G09B 23/28, 23/30, 23/32, 23/34

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 4001951 A (FASSE W. G.), 11 January 1977 (11.01.77) the whole document.	1,2,3 4,5
X A	GB 2241815 A (CANCER RES INST.) 11 September 1991 (11.09.91) figure 1 and 2 and description of figures.	1,2,3 4,5

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„B“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

27 March 2001 (27.03.2001)

Date of mailing of the international search report

12 April 2001 (12.04.2001)

Name and mailing address of the ISA/AT

Austrian Patent Office

Kohlmarkt 8-10; A-1014 Vienna

Facsimile No. 1/53424/535

Authorized officer

KOSKARTI

Telephone No. 1/53424/326

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/BR 00/00159

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
GB	A1	2241815	11-09-1991	GB	A0	9005124	02-05-1990
US	A	4001951	11-01-1977			none	